

COASTAL CONNECTIONS



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A BIMONTHLY PUBLICATION FOCUSED ON TOOLS FOR COASTAL RESOURCE MANAGERS

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COASTAL MANAGEMENT PROFILE



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Hometown: Warwick,
Rhode Island

Education: BS in natural
resource management,
University of Connecticut;
MBA and certificate in public
administration, Memorial
University of Newfoundland

**Most fulfilling aspect
of your job:** Expanding the
program into new areas.

**One work-related
accomplishment you're
proud of:** Passage of
legislation recognizing and
protecting the state's public
trust in submerged lands.

**One personal
accomplishment you're
proud of:**

My two daughters

**Things you do in your
spare time:** Coaching high
school lacrosse, cabinetmaking,
hiking, fishing, and instructing
for a kids' competitive rifle-
shooting program.

Continued on Page 2

THIS ISSUE'S FOCUS

COASTAL AND OCEAN ECONOMICS

How valuable is the fishing industry to a local economy? How much is a visit to the beach worth? How does conserving an estuary affect the economy? For the last several years, coastal managers and economists have been working to determine the "value" of ocean and coastal resources such as these.

A new national initiative, called the National Ocean Economics Program, or NOEP, is trying to answer these questions and others so that coastal managers have a better understanding of the value of an area's resources and how important they are to local and national economies.

Market Values

Sponsored by the National Oceanic and Atmospheric Administration, California State University at Monterey Bay, and the Environmental Protection Agency, NOEP began primarily focusing on the market value of coastal and ocean resources—that is, the resources and activities with quantifiable dollar values and roles in the economy. Charles Colgan, chief economist for the program, has extensively researched the changing market value of coastal and ocean resources. Some of his most significant results include the following:

- Not everyone is moving to the coast as we have been reporting. Rather, the coastal population has been growing at a slightly lower rate compared with inland areas. The difference, however, is that coastal population growth occurs in a much more limited land area, which is what causes problems for housing, cost of living, land use, and other issues.
- The coastal and ocean economy has changed dramatically in the last decade. Traditional ocean industries, such as offshore oil and gas development, shipbuilding, and fishing, are being replaced by the recreation and tourism business. "The coast is becoming the tourism and recreation sector—period," states Judith Kildow, principal investigator for NOEP.
- As business has boomed on the coast, so has employment—but housing hasn't followed. Instead, more and more people are commuting from inland areas. What coastal managers especially need to monitor, says Kildow, is the expansion of this inland population and how they can manage commuters' transportation needs, other infrastructure issues, and the impacts on the environment in these expansion areas.

Nonmarket Values

The second phase of NOEP focuses on the nonmarket value of coastal resources, or those resources that are not traded in the market but still have value to businesses, residents, and visitors. The process of evaluating nonmarket worth, however, is "much more complicated since there are so many ways to estimate it," notes Linwood Pendleton, NOEP's nonmarket research specialist.

Continued on Page 2

Family: Wife, Andrea; daughters, Amy and Heather
In your CD player right now: Led Zeppelin

Although Grover Fugate grew up in the U.S., he has a number of ties to our Canadian neighbors. His mother is Canadian, and the family often spent vacations there. Grover also met his wife in Canada, so it was no surprise that, soon after finishing college in Connecticut, he took a natural resources job in Newfoundland, Canada.

However, after eight years up north, Grover moved to Rhode Island to become the executive director of the state's coastal management program.

In the past 18 years on the job, Grover says his success comes from "keeping the coastal program relevant to the state's decision makers." For instance, in the last several years aquaculture has become a hot issue in the legislature. So Grover and his staff made it a point to focus on that issue while legislators were concentrating on it. "If you don't keep yourself in touch with the legislature and the governor's office, they quickly forget about you," Grover explains. "You have to stay active and up-to-date."

Grover is just as active in his personal life. In addition to coaching girls' soccer for over 10 years, he also helped establish a high school lacrosse program and now coaches the boys' team. In the precious spare time that remains, he also instructs kids in rifle shooting, a skill he learned from his father. Grover and his family live in Warwick, Rhode Island and still vacation in Canada.

Pendleton and the NOEP team are working on this section of the program in two major steps:

- 1) Develop a portal to literature on nonmarket valuation. This portal is now available on the NOEP Web site (www.oceaneconomics.org).
- 2) Expand this portal into an information system that would act as a "super database" with built-in user guidance that helps organize nonmarket values.

The goal of this information center is not only to help managers understand the nonmarket values of coastal resources, but also, as Pendleton explains, "to give these data dollar values so we can compare market and nonmarket values and link them to see their relationships." The group is also collecting data on living resources, such as what species of fish are caught every year and where, and what changes are occurring with these species over time.

The State Level

While the program aims at getting a good look at the overall U.S. coastal and ocean economy, it's also interested in the regional and local values of these resources. The California Resources Agency recently worked with NOEP to produce an in-depth report on the economic value of the state's coastal and ocean resources.

The agency had undertaken a similar, but much more limited, study in 1994 and wanted to see how the initial findings had changed in the last decade. "To this day, people still quote our numbers from 1992 in articles and reports," explains Brian Baird, a program manager for the agency. "We wanted a better picture of the most recent information."

In addition, the state is overhauling its coastal management

policies in its new Ocean Action Plan, which focuses on many of the basic principles noted in the recent report of the U.S. Commission on Ocean Policy. The findings of the commission's coastal economics report can help the state better understand how management decisions affect state and local economics. "We think this is important stuff," notes Baird, "and it's very exciting, particularly with a new governor who's also excited about it."

Both Baird and the NOEP team hope that other states can use the methodology applied in the California report to get a sense of their ocean and coastal economies, as well as that of the nation as a whole. "It's important that we all understand the human impact on the environment and how it changes over time," explains Kildow.

Summaries of the ocean and coastal economy for each state will soon be available on the NOEP Web site. See "Tools You Can Use" on the next page for more on the site.

Resources and References

The following reports, Web sites, and references can help you better understand what is happening in ocean and coastal economics, both nationally and locally.

National Ocean Economics

Program Web Site: This site provides reports, data, terminology, and other information on the state of ocean economics in the U.S. See page 3 for more information about this site. www.oceaneconomics.org

NOAA's Marine Economics Web

Site: NOAA's Coastal and Ocean Resource Economics (CORE) program provides the content of this site, including background on the program and links to current

research, reports, and publications on coastal economics.
www.marineeconomics.noaa.gov

EcoValue: This Web site compiles economic valuation information for ecosystem resources into a geographic information system (GIS), focusing primarily on resources in Maryland. Includes interactive maps, graphs, statistics, and descriptions of the research methodologies used.
<http://ecovalue.uvm.edu/evp/>

Economic Valuation of the Coral Reefs of Hawaii: Part of the Hawaii Coral Reef Initiative, this document reports the findings of a socioeconomic study of Hawaiian reefs. It can be downloaded at <http://marineeconomics.noaa.gov/reefs/hcri1.html>.

"The Value of Lake Erie Beaches": This report summarizes the results of survey research conducted in the late 1990s on two Lake Erie beaches to better understand beach users' recreational values and attitudes. It can be downloaded from the Ohio Sea Grant Web site at www.sg.ohio-state.edu/pdfs/publications/FS/FS-078.pdf.

A Dictionary of Environmental Economics, Science, and Policy: This basic reference book provides definitions of terms from the economics, environmental science, and policy fields. Written by R.Q. Grafton, L.H. Pendleton, and H.W. Nelson, and published by Edward Elgar Publishers, London, in 2001.

Economics 101

As if assessing the economic value of such an intangible activity as going to the beach weren't difficult enough, it's even harder when you have to wade through economic jargon.

This list of common economic terms can help you make sense of it.

Find more terminology at www.ecosystemvaluation.org.

Benefit-Cost Analysis: A comparison of the economic benefits and costs associated with a policy, program, or action.

Benefits Transfer: The process of estimating the economic benefits of a resource in one location and using those estimates to value a resource in another location.

Fixed Inputs: Inputs that go into an economic system (e.g., funding) that do not change no matter what the output (e.g., spending).

Gross Domestic Income: The total value of income earned from the production of goods and services from economic activity conducted within the U.S.

Gross National Product: The total value of goods and services produced by the U.S.

Input/Output Model: A model that depicts the economy in terms of a comprehensive accounting of purchases and sales among industries.

Market Value: The value of goods and services determined by prices at which they are sold in market transactions.

Multiplier Effects: The ripple effects of spending. For instance, ocean-related industries purchase goods and services from other industries, creating wages for those industries' employees. Those employees in turn spend their wages on the goods and services from other industries, including ocean and coastal ones.

Nonmarket Value: The economic value of goods and services that are not bought or sold.

Option Value: The value that people place on having the option to enjoy something, even if they may not do so now (e.g., having the option to go to the beach).

Public Goods: Products or services that people can enjoy without affecting other peoples' enjoyment. An example is clean water, since no matter how many people enjoy it, others can too.

Tools You Can Use The National Ocean Economics Program

The Web site for the National Ocean Economics Program, or NOEP, is chock-full of socioeconomic data to help determine the market and nonmarket values of the nation's oceans and coasts. The site includes four primary databases:

- **Market Values**—search all coastal states by industry, county, coastal growth rate, and population and housing demographics.
- **Living Marine Resources**—search regions and states for fisheries information, including landed weight, value, and price per pound of various fish.
- **Federal Marine Expenditures**—find data on federal marine spending from 1970 to 2000.
- **Nonmarket Values**—browse through available papers and studies on the value of components of the coast not directly bought or sold, such as beach visits, mangroves, and coral reefs.

According to the program's principal investigator, Judith Kildow, the site isn't merely a portal to these types of data but is rather an information hub that "merges coastal data with related socioeconomic data." As a result, coastal managers can use the information system to model an environment similar to their own with an added layer of socioeconomic information. Visit the site at www.oceaneconomics.org.

Coastal Connections is a publication of the National Oceanic and Atmospheric Administration Coastal Services Center, produced for the coastal resource management community. Each issue of this free bimonthly newsletter focuses on a tool, information resource, or methodology of interest to the nation's coastal resource managers.

Please send us your questions and suggestions for future editions. To subscribe or contribute to the newsletter, contact our editors at

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NEWS AND NOTES

Annual Ocean and Coastal Program Managers Meeting

NOAA's Office of Ocean and Coastal Resource Management is holding its annual meeting for coastal, estuarine, and marine sanctuary managers, March 8-10, 2005, in Washington, D.C. The meeting provides a forum for the nation's ocean and coastal managers to discuss and exchange information about important resource management issues. For details and to register, visit: <http://coastalmanagement.noaa.gov/pmm/>.

New Web Site for Marine Protected Areas

Recent studies have found that social aspects are equally as important as biological or physical factors in determining the success of marine protected areas (MPAs). To help coastal managers understand and address the human dimensions of MPA management, the NOAA Coastal Services Center, in cooperation with the National Marine Protected Areas Center, launched a new Web site exploring the social science aspects of marine and coastal resource management. Visit www.csc.noaa.gov/mpass/.

USVI Seafloor Topography Products Available

Data products that characterize nearshore coral reef habitats around Buck Island Reef and the Virgin Islands Coral Reef National Monuments in the U.S. Virgin Islands are now available at http://biogeo.nos.noaa.gov/foster_mission/products.html. The products, including high-resolution images of the seafloor and data depicting seafloor roughness and hardness, were collected this year aboard NOAA Ship *Nancy Foster* by the National Centers for Coastal Ocean Science, Office of Coast Survey, and the U.S. National Park Service.

Transitions

Tricia Ryan has left the Minnesota Department of Natural Resources' Coastal Enhancement Program to serve as Outreach team leader at NOAA's Coastal Services Center. Rebecca Ellin will be leaving a contract position with the Morro Bay National Estuary Program to serve as NERR Coastal Reserve Manager at the North Carolina Division of Coastal Management.

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